

CLAIMS

We claim:

1 1. Gray cast iron alloy for a friction element of a friction clutch having a
2 friction surface for frictional contact with a clutch disk, wherein the alloy contains:

3 3.0 – 3.4 percent by weight C;

4 1.8 – 2.3 percent by weight Si;

5 0.4 – 0.8 percent by weight Mn;

6 0.0 – 0.35 percent by weight P;

7 0.0 – 0.125 percent by weight S;

8 0.4 – 0.6 percent by weight Mo; and

9 a remainder comprising iron and production-related impurities and/or additives.

10 2. A friction element for a friction clutch having friction surface for
frictional contact with a clutch disk, wherein said friction element is formed of flake graphite
alloy comprising:

3 3.0 – 3.4 percent by weight C;

4 1.8 – 2.3 percent by weight Si;

5 0.4 – 0.8 percent by weight Mn;

6 0.0 – 0.35 percent by weight P;

7 0.0 – 0.125 percent by weight S;

8 0.4 – 0.6 percent by weight Mo; and

9 a remainder comprising iron and production-related impurities and/or additives.

1 3. The friction element of claim 2, wherein said friction element comprises
2 a pressure plate.

1 4. The friction element of claim 2, wherein said friction element comprises
2 a flywheel mass part.

1 5. The friction element of claim 2, wherein said friction element comprises
2 an intermediate plate of a multidisk clutch.

3 6. The friction element of claim 2, wherein said friction element is cast and
4 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of
5 at least 2.5 hours after casting.

6 7. The friction element of claim 6, wherein said friction element is stress-
7 relief annealed at a temperature within a range including 500°C to 550°C for a period of at
8 least 3 hours.

1 8. The friction element of claim 3, wherein said friction element is cast and
2 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of
3 at least 2.5 hours after casting.

1 9. The friction element of claim 8, wherein said friction element is stress-
2 relief annealed at a temperature within a range including 500°C to 550°C for a period of at
3 least 3 hours.

4 10. The friction element of claim 4, wherein said friction element is cast and
5 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of
6 at least 2.5 hours after casting.

1 11. The friction element of claim 10, wherein said friction element is stress-
2 relief annealed at a temperature within a range including 500°C to 550°C for a period of at
3 least 3 hours.

4 12. The friction element of claim 5, wherein said friction element is cast and
5 stress-relief annealed at a temperature within a range including 450°C to 600°C for a period of
6 at least 2.5 hours after casting.

1 13. The friction element of claim 12, wherein said friction element is stress-
2 relief annealed at a temperature within a range including 500°C to 550°C for a period of at
3 least 3 hours.
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